



Satellite PTT Radio Covers 1,726 NM from Yokohama to Palau with One-to-Many Global Communication

Background

- **Needed reliable communications**

The organizer needed a communication system the full ocean race course (1,726 NM, 3,197 km) where there was no communication infrastructure.

- **Needed an effortless tool**

The organizer on land, and yachts on the ocean, wanted to effortlessly communicate with one another.

- **Needed safe and fair communication**

The organizer needed a reliable communication tool that would not be affected by storms or problems. In addition, they wanted to fairly share information with all yachts, regardless of their equipment.

Result

- **Wide area global communication**

The Iridium® satellite network covers the entire earth, including both poles, and can provide wide area global communications anywhere on the planet.

- **Simple one-to-many communication**

Unlike satellite phones, IC-SAT100 users can immediately start talking to all the radios in the same talkgroup, with just a push of the transmit (PTT) button.

- **Disaster-resistant and real-time communication**

Using 66 Low Earth Orbit (LEO) Iridium® satellites, the IC-SAT100 provides low-latency communication, even in emergency situations.

Selection

- **Difficulties of satellite phones**

Satellite phones using geostationary satellites may have communication difficulties when an organizer makes a call to a race yacht on the ocean. In addition, satellite phones are for one-to-one communication that take a long time to share information with everyone.

- **Difficulties of VHF marine radios and other radios**

VHF marine radios are not suitable for long distance communication. Some radios require complicated license applications.

- **Benefit of the Icom's satellite PTT radio**

One-to-many communication can be made by only a push of the transmit button. Because the Iridium® satellites are non-geostationary, you do not need to be concerned with the location of the satellites. In addition, the satellite PTT radio requires no license, no qualifications, and no registration.

Favorable reviews from on-site teams...

An epochal system that can timely grasp the position information of yachts and immediately share it with everyone.



Organizer of 2019-2020
Japan-Palau Goodwill Yacht Race
Mr. Ken Ando

Stable communication is essential for yacht races

If your communication is interrupted on the sea, nobody can save you. To avoid dangerous situations, we recommend race participants (especially in long distance races) to use satellite phones. However, a satellite phone depending on geostationary satellites requires users to turn the antenna toward a communication satellite, so sometimes it is difficult for them to readily communicate. Therefore, we were searching for a more efficient and reliable communication tool, and then finally we found the IC-SAT100, Icom's satellite PTT radio.

One-to-many communication makes a roll call quick and smooth

We used the IC-SAT100 for roll calls twice a day during the race. A roll call is a regular contact that race participants report their location, wind direction, and any abnormalities of their yacht. All seven race yachts and the escort ship have to report their own situation in order, according to our instructions. Previously we had used satellite phones, but it took long time to complete the roll call because they are only for one-to-one communication. Therefore, real-time information sharing was not made. In contrast, the IC-SAT100 offers one-to-many communication, so the roll call time was greatly reduced. We could timely share information with all race participants.

Advanced precaution of a storm

We had a severe storm and the ocean got very rough on December 30, but we could inform race participants of the weather in advance using the IC-SAT100. If an accident occurred on the ocean, usually a ship near the accident should go to the sailor's rescue. This time, we could share storm information in real time and be prepared for the worst case.

Amazing by-products of the IC-SAT100

The IC-SAT100 provided two unexpected by-products. One is that the IC-SAT100 contributed to the excitement of the race. When receiving a signal, the IC-SAT100 shows transmitter's position information (direction and distance) on the display, so race participants could know the ranking of the race, and were very excited to see it during roll calls. The other is that we could determine the race participants' mental condition from their voices. This is because the IC-SAT100 audio was so clear that we could tell their emotions. It was very thankful for us to take care of the race participants and make the race safe.

Communication configurations

Ten IC-SAT100 were used for roll call (twice-a-day regular contact).
For in-building use, an external AH-40 antenna was used when needed.

<Devices>

10 Satellite PTT radio IC-SAT100

<Details>

Organizer (in Yokohama):

Two IC-SAT100 (one for backup)

Seven race yachts:

One IC-SAT100 per yacht

The escort ship: one IC-SAT100

<Communication Plan>

Communication range: Extra large

Talk group: One



IC-SAT100



AH-40
(External antenna)

<Organization>

2019-2020 Japan-Palau Goodwill Yacht Race

Period: From December 29, 2019 to January 20, 2020

Outline: The race was a 1,726 NM long-distance yacht race from Yokohama to Palau, held to commemorate Palau's independence (25th anniversary).



Boat/Yacht Tracking System (provided by Furuno Electric Co., Ltd.)

A map above is data log of the Boat/Yacht Tracking System provided by Furuno. Location information of the race yachts was automatically transmitted and plotted on the map. During the race, data of the tracking system was shown on the official website, and everyone could timely watch the race on the Internet.

Icom, Icom Inc. and the Icom logo are registered trademarks of Icom Incorporated (Japan) in Japan, the United States, the United Kingdom, Germany, France, Spain, Russia, Australia, New Zealand and/or other countries. Iridium and the Iridium connected logo are trademarks and registered trademarks of Iridium Satellite LLC. All other products or brands are registered trademarks or trademarks of their respective holders.

Icom Inc. 1-1-32, Kamiminami, Hirano-Ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013

www.icomjapan.com

Count on us!

Icom America Inc.
www.icomamerica.com

Icom (Europe) GmbH
www.icomeurope.com

Icom (Australia) Pty. Ltd.
www.icom.net.au

Your local distributor/dealer:

Icom Canada
www.icomcanada.com

Icom Spain S.L.
www.icomspain.com

Shanghai Icom Ltd.
www.bjicom.com

Icom Brazil
E-mail: sales@icombrasil.com

Icom (UK) Ltd.
www.icomuk.co.uk

Icom France s.a.s.
www.icom-france.com